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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/050,339	01/15/2002	Mark E. Tuttle	MICRON.248A	6223

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EXAMINER

TRAN, MAI HUONG C

ART UNIT	PAPER NUMBER
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2818

DATE MAILED: 05/12/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/050,339	TUTTLE ET AL.	
	Examiner	Art Unit	
	Mai-Huong Tran	2818	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 21 April 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-41 is/are pending in the application.
- 4a) Of the above claim(s) 19-32 and 35-39 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-18, 33, 34, 40 and 41 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restriction

Application's election without traverse of Group I (Claims 1-18, 33-34, and 40-41) in Paper No. 5 drawn to a semiconductor device is acknowledged for prosecution in the subject application. Accordingly, claims 19-32 and 35-39 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

Applicants have the right to file a divisional application covering the subject matter of the non-elected claims.

Claim Rejections - 35 U.S.C. § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-5 and 11-16 are rejected under 35 U. S. C. § 102 (b) as being anticipated by U.S. Patent No. 6,027,948 to Jensen et al. or U.S. Patent No. 5,939,772 to Hurst et al. or U.S. Patent No. 5,751,553 to Clayton.

Jensen discloses a housing for protecting an integrated circuit device comprising a molded body 36 encapsulating the integrated circuit device 32; and at least one magnetically permeable foil 54 applied to an outer surface of the molded body as set forth in col. 3, lines 3-14 and fig. 2b.

Hurst discloses a housing for protecting an integrated circuit device comprising a molded body 12 encapsulating the integrated circuit device 20; and at least one magnetically permeable foil 26, 36 applied to an outer surface of the molded body as set forth in col. 2, lines 1-14, and figs. 1-2.

Clayton discloses a housing for protecting an integrated circuit device comprising a molded body 12 encapsulating the integrated circuit device 54; and at least one magnetically permeable foil 48 applied to an outer surface of the molded body as set forth in col. 9, lines 19-64, and fig. 2.

Regarding to claim 2, Jensen discloses the housing wherein the integrated circuit device comprises at least one magnetic thin film. (col. 2, lines 49-53).

Claim 3 is rejected under the same rationale set forth above to claim 1.

Claim 4 is rejected under the same rationale set forth above to claim 3.

Claim 5 is rejected under the same rationale set forth above to claim 1.

Claim 11 is rejected under the same rationale set forth above to claim 1.

Claim 12 is rejected under the same rationale set forth above to claim 1.

Claim 13 is rejected under the same rationale set forth above to claim 1.

Claim 14 is rejected under the same rationale set forth above to claim 1.

Claim 15 is rejected under the same rationale set forth above to claim 14.

Claim 16 is rejected under the same rationale set forth above to claim 15.

Claims 33-34 are rejected under 35 U. S. C. § 102 (b) as being anticipated by U.S. Patent No. 6,027,948 to Jensen et al. or U.S. Patent No. 5,939,772 to Hurst et al.

Regarding to claim 33, Jensen discloses an integrated circuit die 32; a molded body 36 encapsulating the die; and a magnetic shield layer extending over an outer surface of the molded body and parallel to a major surface of the die, the magnetic shield layer being electrically insulated from the die as set forth in col. 2, lines 42-53, col. 3, lines 1-16, and fig. 2b.

Hurst discloses an integrated circuit die 20; a molded body 12 encapsulating the die; and a magnetic shield layer 36 extending over an outer surface of the molded body and parallel to a major surface of the die, the magnetic shield layer being electrically insulated from the die as set forth in col. 2, lines 1-24, and fig. 1.

Regarding to claim 34, Hurst discloses the integrated circuit package, wherein the magnetic shield layer is mechanically trapped within a molded recess on an outer surface of the molded body (fig. 1).

Claims 40-41 are rejected under 35 U. S. C. § 102 (b) as being anticipated by U.S. Patent No. 5,939,772 to Hurst et al.

Regarding to claim 40, Hurst discloses an integrated circuit package comprising an encapsulant surrounding an integrated circuit die, the encapsulant including a recess on an outer surface thereof, and the recess configured for receiving and mechanically retaining a magnetic shield foil (fig. 1).

Claim 41 is rejected under the same rationale set forth above to claim 40.

Claim Rejections - 35 U.S.C. § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-10 and 17-18 are rejected under 35 U.S.C. 103 (a) as being unpatentable over U.S. Patent No. 6,027,948 to Jensen et al. in view of Suzuki et al. (5,866,942).

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Regarding to claim 6, Jensen discloses the claimed invention except for the housing wherein the plastic substrate comprises a ball grid array substrate. Suzuki discloses the housing wherein the substrate comprises a ball grid array substrate as set forth in col. 11, lines 23-45.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to form the housing wherein the substrate comprises a ball grid array substrate, as taught by Suzuki in order to apply to the manufacture of high frequency semiconductor devices (col. 4, lines 10-11).

Also, Suzuki discloses a metal substrate and not a plastic substrate. It would have been obvious to one having ordinary skill in the art at the time the invention was made to form a plastic substrate, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use as a matter of obvious design choice. In re Leshin, 125 USPQ 416.

Claim 7 is rejected under the same rationale set forth above to claim 5.

Claim 8 is rejected under the same rationale set forth above to claim 5.

Claim 9 is rejected under the same rationale set forth above to claim 1.

Claim 10 is rejected under the same rationale set forth above to claim 9.

Claim 17 is rejected under the same rationale set forth above to claim 1.

Claim 18 is rejected under the same rationale set forth above to claim 1.

Conclusion

Any inquiry concerning this communication on earlier communications from the examiner should be directed to Mai-Huong Tran, (703) 305-1958. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 6:30 PM. The examiner's supervisor, David Nelms can be reached on (703) 308-4910.

The fax phone number for the organization where this application or proceeding is assigned is (703) 308-7724. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.



Mai-Huong Tran


HOAI HO
PRIMARY EXAMINER